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Geography and Sustainability Education in Finnish schools

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Introduction

General education in Finland is based on the nine years of comprehensive school the aim of which is to offer equal opportunities for all the children to receive education. Before that, children have one year of pre-primary education when they are six years old. Compulsory education takes nine years (six years in primary and three years in lower secondary schools) and it is followed by general or vocational upper secondary education that both usually take three years. Education is free for all the students from the pre-primary to upper secondary levels. (Finnish Education in a Nutshell 2012).

Geography is taught as an individual or integrated subject in primary and general upper secondary schools. The status of geography has been changing during the decades, but it has been included in the national framework curricula throughout the history of the comprehensive school system from its start in the beginning of the 1970s. In this article, the new version of the curriculum will be described. Special attention will be paid to the changes of the status of geography compared to the old curriculum. The role of education for sustainable development as part of geography education will also be explored.

To understand the Finnish education system and the position of geography education as part of it, some major challenges of the subject will be explored in this paper. It will be shown how there have been – and there still are – issues that have either threatened the future of geography education or at least made its development problematic. First, geography has a close connection with biology, which has on one hand made it difficult to develop the social-scientific dimension of the discipline but, on the other hand, it has kept the links to the natural sciences relatively strong. Second, a long tradition of regional geography in schools has kept the gap between contemporary academic geography and school geography wide. Third, the lack of a 'big picture' of the subject has sometimes made it difficult to connect broader educational aims to geographical content knowledge and to construct links between fragmented pieces of knowledge.

In addition to the challenges listed above, the main elements of the new core curricula for primary and secondary schools will be described. Special attention will be paid to one of the new concepts that have been introduced to the core curricula; that of an 'eco-social approach to well-being'. It will be asked if this approach could help geography teachers to better fight against the possible pitfalls that the three above-mentioned challenges may create. The eco-social approach will be analysed in the context of education for sustainable development.

Three challenges of geography education in Finland

Next, I will describe three issues that I see as challenges in the role and status of geography education in Finnish schools. It is fair to say that these issues can also be viewed from a different perspective, the one of the opportunities they can offer to geography teaching, but for the perspective of this article, their problematic side deserves a closer look.

There are remarkable differences in the ways of positioning geography as a school subject in different countries. In many countries, for example in the United States, it is one of the social sciences, while in some others, for example in England, it is taught together with humanities (Lambert, Solem & Tani 2015). In Finland, the situation is different: due to some historical reasons, almost all geography teachers' posts are connected to biology, which means that the majority of the geography teacher students study both geography and biology in their degrees (Tani 2014). Most of them have biology as their major subject while geography is studied only as a minor subject (bachelor level). This means that teachers' knowledge of geography is often more limited than that of biology. It also means that for many teachers, topics of physical geography may be more interesting because they are more easily connected to the natural scientific thinking, whereas human and social sides of the discipline are often regarded as more difficult or, as some teachers and teacher students may think, even boring to teach. This can be seen as a challenge for geography teaching, because many of the important issues of this day and age (such as climate change, globalisation, sustainable development and cross-cultural understanding, just to name but a few) are impossible to understand without a deeper knowledge of human and social geography.

The second challenge is the gap between school geography and the academic discipline. This gap has been observed in many countries. In Finland, one of the reasons for the situation is the strong tradition of regional geography in schools, which has kept the subject especially in primary and lower secondary schools often far from the recent developments in academic geography. There would be, however, many themes and perspectives that could be easily transferred into the

school context. Among these are for example, recent work in children's and young people's geographies, tourism geography, feminist and development geographies, urban and cultural geographies, and many more (Tani 2011).

The third challenge is related to the amount of detailed and factual knowledge that has been included in geography education. This is especially the case in upper secondary school that ends with the matriculation examination. Students do not have to make the test in all the school subjects, but the existence of the examination is a powerful agent guiding teachers' choices of what and how to teach. This can easily lead to the emphasis of factual knowledge at the expense of deeper understanding. The aim to understand the 'big picture' of the world and to understand connection between different issues may be lost. At the same time the stress to study for the final examination can lead to a lack of time for broader educational aims and value-based issues. Teachers and students may not have enough time for important discussions and for studying complex phenomena where different bodies of knowledge could be brought together.

These three challenges described above can also be seen from the opposite angle: they all offer some opportunities, which can be seen as positive features in school geography. The close link between geography and biology can help students understand scientific aspects of complex phenomena such as climate change. The strong tradition of regional geography and the amount of studied facts give students a good knowledge base on the world. These three features, despite the perspectives they are studied from, are always affecting the renewal process of geography curricula. What is regarded as relevant in geography education? What kind of knowledge is seen as important for students and their futures? What are the values that school geography should represent?

Next, I will briefly describe the renewal process of the national framework curricula that has been going on in recent years. Then, I will explain the status, aims and contents of geography in the new core curricula, after which I will make an introduction of the concept of 'eco-social approach to well-being'. This will be done in order to start a discussion about its potential to overcome the three obstacles illustrated above.

Geography curricula in Finnish schools

The new version of the national core curriculum for primary and lower secondary schools has been published in 2014 and for upper secondary schools in 2015 (Finnish National Board of Education 2014, 2015). The process for the basic education (first nine years of schooling, including six years of primary school and three years of lower secondary school) was organised so that the special working groups of different stakeholders (including teachers, teacher educators and

representatives of education providers) made first drafts of the curricula, which were then published online and opened for everyone to make comments and suggestions. The received feedback was then taken into account before the Finnish National Board of Education approved the final version of the core curriculum in December 2014. The new core curriculum is implemented at the primary level in 2016 and at the lower secondary level gradually starting from 2017. General upper secondary schools have also gone through the curriculum renewal process. The new curricula were published in October 2015 and will be implemented in the autumn 2016 for the starters of the upper secondary school and then gradually for all the levels of the school. Main differences between the old and new curricula are described in Table 1.

Table 1. The status of geography in the core curricula for primary and secondary schools in Finland in the former and the most recent curricula.

Grade	Name of the school subject in curricula (Finnish National Board of Education 2003, 2004)	Name of the school subject in curricula (Finnish National Board of Education 2014, 2015)
1–4	Environmental and Natural Studies	Environmental Studies
5–6	Biology and Geography	
7–9	Geography	Geography
Upper secondary school	Geography <ul style="list-style-type: none"> • 2 mandatory courses ('Blue Planet' & 'Our Common World') • 2 optional courses ('World of Risks' & 'Regional Studies') • schools can organise some extra courses 	Geography <ul style="list-style-type: none"> • 1 mandatory course ('The Changing World') • 3 optional courses ('Blue Planet', 'Our Common World', 'Geomedia: Study, Participate, Influence') • schools can organise some extra courses

Geography has undergone some changes in the new curricula when compared to the previous core curricula from the early 2000s, and even when the changes may seem modest, the status of geography has slightly weakened. The core curriculum of 2004 stated that geography was studied as part of the subject 'Environmental and Natural Studies' in grades 1–4, integrated together with biology, physics, chemistry and health education. In the 5th and 6th grades biology and geography were defined as one school subject, but their aims and contents were separately described (Finnish National Board of Education 2004). In the new curriculum, geography will be integrated with biology, physics, chemistry and health education in a subject called 'Environmental Studies' during the first six years

(primary school level). In grades 7–9, geography has been taught as a separate subject, and it will remain its individual status in the new curriculum as well (Finnish National Board of Education 2014).

In the 2004 curriculum for lower secondary schools the content of geography teaching was defined under four themes: 'Earth – human being's home planet', 'Europe', 'Finland in the world' and 'the common environment' (Finnish National Board of Education 2004). The four themes were then explained by listing issues that highlighted the importance of knowledge in the subject. Emphasis was thus placed on the questions of 'what' and 'how' students were hoped to learn geography. These goals were described in detail in the context of the criteria for good achievement: students should know how to 'perceive', 'recognize', 'describe', 'depict', 'compare', 'analyse' and 'explain' certain issues. They should also be able to 'apply geographical knowledge' and 'plan and carry out small-scale studies'. What were completely left out of these descriptions, though, were all the references to the students' own experiences and actions based on them.

Knowledge was thus been highlighted in the aims of the subject whereas no clear definitions of value-based goals were given; the only exception was one sentence that had some connotation to values: 'Geography instruction must support the pupils' growth as active citizens committed to a sustainable way of life' (Finnish National Board of Education 2004, 182). Goals of the subject were listed as issues that students should learn and understand. Two of these can be connected to values: students should 'know how every citizen in Finland can have an impact on the planning and development of his or her own living environment', and that they should 'understand and evaluate critically news information on such issues as global environmental and development questions, and learn to act in accordance with sustainable development themselves' (Finnish National Board of Education, 2004, 182; Tani 2014). The last sentence is the only one in the 2004 geography curriculum that includes any reference to the students' role as active individuals. Most of the aims have been linked to the cognitive outcomes of education: *knowing* and *understanding* have been defined as important features in students' learning, whereas their own actions in the learning process have hardly been mentioned. It is thus relevant to question whether the students have been encouraged to act in an environmentally responsible way, or whether it has been viewed to be sufficient that they just know what kinds of actions would be needed in order to practise a sustainable way of life.

The aims of the subjects are described in more detail in the new core curriculum compared to earlier ones. The aims are linked to 'meaning, values, and attitudes', 'skills for investigation and action', and 'knowledge and understanding'. Main contents of each subject are then described and attached to these aims, skills and competencies. The new curriculum for lower secondary schools (Finnish National

Board of Education 2014) has been designed to highlight students' role as active agent in learning process. Even when knowledge is still been regarded as important, more emphasis has been placed on the attempts to 'learn to learn', skills and competencies as well as values. Objectives are expressed under three categories: 1) Geographical knowledge and understanding (four objectives); 2) Geographical skills (seven objectives; and 3) Objectives related to attitudes and values in geography (two objectives). Six key content areas are listed in the new curriculum (Finnish National Board of Education 2014, 661–662):

- 1. *The map and regions of the world***
 - *basic concepts of the map*
 - *different field maps and thematic maps*
 - *perceiving the world as a whole*
 - *learning key place names of Finland, Europe and the world.*
- 2. *The current, changing world***
 - *following the latest news and locating them on the map*
 - *reflecting critically the news*
 - *familiarizing oneself with geographical skills*
- 3. *Basic conditions for life on Earth:***
 - *changes in times of day, seasons and climate*
 - *vegetation zones*
 - *examining basic conditions for life, their occurrence and sustainable use*
- 4. *Changing landscapes and living environments***
 - *observing the special features of students' local area and landscape areas in Finland*
 - *conducting field studies in local surroundings*
 - *participating in preserving diversity and in planning and improving comfort and safety in their surroundings*
 - *studying natural and cultural landscapes of different areas of the world*
- 5. *People and cultures on Earth***
 - *cultures, people's way of life, housing, and industries in Finland, Europe and other parts of the world*
 - *impacts of the environment on livelihood, housing, and other human activity*
 - *discussing human rights and the prerequisites for a good life, particularly from the viewpoint of children and young people*
- 6. *A sustainable way of living and sustainable use of natural resources***
 - *possibilities of bioeconomy in Finland and elsewhere in the world*
 - *examining the life cycles of products*
 - *considering personal consumer choices and activity as responsible citizens*
 - *environmental changes, particularly the climate change and the loss of biodiversity*
 - *the state of the environment and possibilities for cooperation in the Baltic Sea region*
 - *the effects of globalisation and questions of regional development*

The list above shows the major change in the geography curriculum: when the 2004 curriculum had a strong emphasis on regional geography and factual knowledge, the new curriculum highlights the importance of enhancing students' understanding of complex phenomena and their abilities to critically evaluate information coming from different sources. Their own role as active and responsible citizens is also emphasized.

The change of the status of geography in upper secondary schools has been more remarkable than the situation in basic education. In the 2003 curriculum, geography had two obligatory and two voluntary courses that every school had to offer. The courses that were studied by all the students covered basics of physical and human geography, while the voluntary courses dealt with environmental risks (so-called hazard geographies) and regional studies. In the new curriculum, geography has only one mandatory course and three voluntary courses (Finnish National Board of Education 2015). The mandatory course 'The Changing World' is designed to help students familiarise themselves to examine the changing world and its regional problems. Current news from different parts of the world is followed and the vulnerable regions regarding natural and environmental hazards and risks of humankind are studied. The course concentrates not only on risks but also on positive development and opportunities that are needed for controlling, preparing for, foreseeing and adapting to the risks. 'Eco-social sustainability', 'circular economy' and 'global development issues' are defined as essential viewpoints for geography education. The skills to use different kind of geographical media ('geomedia' as it is phrased in the new curriculum) are also emphasized in the curriculum.

Integration in Finnish schools – potential for sustainability education

Geography has common features with many other school subjects. As it has already been mentioned, geography teachers in Finland have usually also studied biology in their academic degrees and therefore these two subjects have many connecting links in schools. There are also many themes that can be shared with other school subjects and therefore, it is important to take a look at the ways in which integration of subjects is organised in national curricula in Finland.

In the former core curriculum for the primary and lower secondary schools (Finnish National Board of Education 2004) cross-disciplinary themes were defined; they were supposed to be integrated into all school subjects. The cross-curricular themes were also defined for the upper secondary school in the 2003 curriculum (Finnish National Board of Education 2003). There were many similarities in these themes (see Table 2).

Table 2. Cross-curricular themes for basic education and upper secondary schools in the 2003 and 2004 core curricula.

Core curriculum for primary and lower secondary school (Finnish National Board of Education 2004)	Core curriculum for upper secondary schools (Finnish National Board of Education 2003)
Cross-curricular themes	
Growth as a person	

Cultural identity and internationalism	Cultural identity and familiarity with different cultures
Media skills and communication	Media skills and communication
Participatory citizenship and entrepreneurship	Active citizenship and entrepreneurship
Responsibility for the environment, well-being, and a sustainable future	Sustainable development
Safety and traffic	Wellbeing and safety
Technology and the individual	Technology and society

Earlier ideas of cross-curricular themes have now been replaced by descriptions of skills and competencies (such as ‘learning to learn’, ‘skills for everyday life’, but also ‘participation and creating sustainable future’, etc.) in the new core curriculum for primary and lower secondary education. These skills and competencies are designed to be implemented in every school subject. In addition to that, more emphasis is put on creating subject integration so that phenomenon- and discipline-based studying would be possible.

Geography education has always been linked with environmental education in one way or the other, but the ways in which environmental education has been defined in the curricula has changed over the years. ‘Environmental education’ as a concept was mentioned for the first time in the 1985 national curriculum, but was then converted to ‘promotion for sustainable development’ in the 1994 core curriculum. In 2004, it was defined as follows: ‘Geography instruction must support the pupils’ growth as active citizens committed to a sustainable way of life’ (National Board of Education 2004, 182). In the new version of the core curriculum, more emphasis has been given to the idea of enhancing sustainable way of life; it is stated that sustainability and an ‘eco-social approach’ are essential elements that are acknowledged in basic education. An eco-social approach to education is defined as a holistic approach that integrates ecological concerns (e.g. planetary boundaries, vital ecosystem services and foundations of life) with social concerns (e.g. human rights, equity, dignity and social justice) (Salonen & Konkka 2015). It includes four essential elements: participation, systems thinking, sufficiency, and responsibility.

It will be interesting to see how the eco-social approach and the ideas behind it will be applied in teaching of different school subjects. For geography education, it may offer good links that could bring the physical and social dimensions of the subject more tightly in connection to each other. It could also have the potential to build bridges between contemporary academic geography and school geography, and it may offer students new ways to learn to construct the ‘big picture’ instead of concentrating in fragmented knowledge. In the near future, we will see what kinds of applications schools and teachers will create when they start to plan their local curricula based on the national guidelines, and how the textbook writers will answer the aims that have been defined in the core

curriculum.

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